



## **Regional Airport Planning Committee**

October 5, 2007

**TO:** Regional Airport Planning Committee  
**FROM:** Staff of the Regional Airport Planning Committee  
**SUBJECT:** Proposed Phase 2 Work Scope and Decision Process

**Staff Recommendation.** The staff recommends that the Committee adopt the following work scope for Phase 2 of RAPC's three-phase work plan. The work scope includes the establishment of a stakeholder group that would consist of interested parties who would provide policy input on the work and direction of Phase 2, and the creation of three working groups to provide technical expertise on aviation forecasting, aviation technology and demand management.

**Background.** On July 28, 2006, the Regional Airport Planning Committee (RAPC) adopted a three-phase work plan to direct the work of RAPC over the next three to five years. Phase 1 consisted of four technical panels providing information on forecasting, aviation technology, demand management and governmental institutions.

On July 27, 2007, RAPC staff provided the Committee with a series of recommendations on what staff determined should be included in Phase 2 of the work plan. RAPC requested that the Phase 1 conclusions be integrated with the revised work plan and more closely tied to the proposed tasks. Committee members also requested that the forecast assess the impacts of business jets and of varying types and sizes of planes on capacity. RAPC also requested that assessments of ground access be integrated into this work. These comments were reinforced by public comment at the workshop. RAPC staff will present recommendations for Phase 2 for a second time to the Committee for adoption at the October 15, 2007 RAPC meeting. These recommendations were based on the information received during the technical panels, comments from the public, comments and direction from RAPC and also flow from the direction included in RAPC's adopted work plan.

**Phase 2 Work Scope Outline and Decision Process.** While Phase 1 focused on the evaluation of solutions for use at the Bay Area's three commercial airports, Phase 2 moves beyond the airport grounds to evaluate solutions that may be provided by alternatives such as airline and air cargo service at alternative airports, diversion of some air passengers to a future California High Speed Rail System and also continues to evaluate tools for use at the three

commercial airports, such as use of new air traffic control technology, demand management at existing airports, and new institutional approaches. Phase 2 will emphasize public input and a

visioning process to develop consensus on a long-range aviation plan for the region. Phase 2 incorporates the findings and recommendations from Phase 1 as described below. MTC has received \$585,000 from the FAA for work on Phase 2, and MTC has allocated an additional \$290,000 for this effort. The work scope and a budget for Phase 3 will be determined by RAPC at the conclusion of Phase 2.

A proposed outline for Phase 2 is provided below.

## **Phase 2 Work Scope**

### **Task 1. Public Input**

- **Comment.** Staff envisions a comprehensive public outreach process for Phase 2, consisting of workshops, meetings, web postings and notification by mail and e-mail of upcoming events. The overall goal would be to develop regional consensus on a vision for a regional aviation system plan that meets the travel needs of Bay Area residents and supports a strong economy. The outreach effort would address the following topics:
  1. What is the long-range vision for addressing Bay Area aviation needs?
  2. What are the alternative scenarios for addressing Bay Area aviation needs?
  3. What are the next steps?
  4. Who is responsible?
  5. What should RAPC do specifically?

There would be three major rounds of public outreach, one at the beginning of Phase 2, one at the midpoint to provide an opportunity to evaluate the direction of the work and one at the end to review RAPC's preliminary recommendations. The workshops would be held in different parts of the region, as all parts will be a potentially affected by RAPC's recommendations for a long-range strategy. A consultant would be retained to manage this outreach process and develop new ways of engaging the public and local communities in a dialog about future aviation alternatives.

In order to broaden RAPC's reach and increase participation by stakeholders, staff recommends the creation of a stakeholder group of key interested parties that would be convened regularly throughout the process to review and comment on the direction and results of the work, focusing on the policy questions that arise during Phase 2. The stakeholders would provide contacts to other organizations and help disseminate the information developed by RAPC as well as help engage these other organizations in RAPC's process. The stakeholders would provide RAPC staff with valuable feedback, and this feedback will be conveyed to the Committee through regular reports. Members of the stakeholder group will also be encouraged to attend RAPC meetings and make comments there as well.

Staff recommends that the stakeholder group include representatives from RAPC, including the three Bay Area commercial airports and the general aviation airports, and representation that would cover noise issues, environmental issues, economic and business concerns and representation from other airports that would be reviewed for new airline or air cargo service, both inside and outside the region.

In addition to the stakeholder group, staff recommends that three technical working groups be formed to provide RAPC with technical advice on three topic areas–

forecasting, new aviation technology and demand management. Similar to the Phase 1 panels, the technical working groups would consist of people with expertise in the topic area and the work of each group would result in a report that would be provided first to the stakeholder group and then to RAPC. More detail on the working groups can be found in the tasks below.

#### **Task 1 Deliverables**

- Schedule, location and outreach plan for three rounds public workshops.
- Agendas, material, minutes and outcomes from each of the three public workshops.
- List of names and affiliations for stakeholder group and preliminary schedule for stakeholder group meetings.
- List of names and affiliations for technical working group members and a preliminary schedule for working group meetings.
- Agendas and minutes from stakeholder group meetings and working group meetings.

#### **Task 2. Update Aviation Forecasts.**

##### **Phase 1 Recommendations regarding aviation forecasting:**

1. In order to better inform the discussion of future regional aviation system options in Phase 2, updated forecasts should be developed for unconstrained air passenger, air cargo and business general aviation demand.
2. As with the earlier RASP forecasts, a careful evaluation of long-term trends in the price of air transportation, airline route strategies, and other key market-drivers will be essential to developing meaningful forecasts.
3. The forecasts should be of sufficient detail to assess the potential passenger and air cargo demand that could be served by alternative airports and the impact of general aviation on future runway capacity issues at the three major commercial airports.
4. To better understand current and evolving aviation demand trends, a tracking system of key forecast indicators should be developed.

##### **Task 2.a. Develop new baseline aviation forecasts for the following areas (for the region and for the individual airports):**

1. Air passengers
  2. Air cargo
  3. Business General Aviation
- **Comment:** As described above, staff will form a working group of experts (similar to the Phase 1 expert panels) who will advise the stakeholder group and RAPC on assumptions to use in developing updated aviation forecasts. Staff does not anticipate investing heavily in a large-scale forecasting effort (as was done in the 2000 RASP), since experience shows the forecasts can become quickly outdated, resources are limited, and the creation of a tracking system should allow for periodic adjustment to the forecasts when events require it.

**Task 2.b. Examine Potential Airport System Scenarios (i.e., alternative airport combinations for serving future demand)**

- **Comment.** Staff would invite representatives from selected airports (e.g. Monterey, Stockton, Sacramento, general aviation, Travis AFB) to brief RAPC on their current services and future plans for expanding service. The initial public outreach effort will obtain feedback on a wide range of conceptual airport system scenarios identified in Attachment A. After receiving public input on alternative scenarios, staff will recommend a specific set of scenarios for further evaluation, combining or eliminating various elements of the scenarios in Attachment A. RAPC will be asked at that time to review and endorse this specific set. Following action by RAPC, staff will work with consultants to analyze the potential aviation demand that might be handled by the airports in each scenario (air passengers, air cargo, or business aviation, depending on the particular role identified for the airport).

**Task 2.c. Examine Potential Demand Diversion from a future HSR system**

- **Comment:** The California High Speed Rail Authority has been updated the ridership and revenue forecasts, as well as evaluating alternative alignments, for a proposed High Speed Rail system. The ridership forecasts will provide an indication of the possible diversion of Bay Area airport users to such a system, based on the proposed HSR alignment, service levels, and fares. This diversion will be reassessed against the aviation forecasts to determine the affect on runway demand at the three Bay Area commercial airports.

**Task 2.d. Develop an aviation forecast tracking system**

- **Comment.** The forecast working group would also assist in developing a tracking approach.

**Task 2 Deliverables**

- Updated baseline aviation forecasts
- Definition of preliminary aviation system scenarios for initial analysis
- Individual airport forecasts based on scenarios
- Analysis of ridership forecasts for California HSR and the impact of a future HSR system on Bay Area air travel demand
- Aviation forecasting tracking system

**Task 3. Determine Baseline Runway Capacity Shortfalls at SFO/OAK/SJC**

**Phase 1 Recommendations for Demand Management and Aviation Technology:**

1. Airport capacity analyses in Phase 2 should identify the most promising and realistic new air traffic control and demand management strategies and estimate the impact at specific airports.
2. RAPC should receive and review reports from NASA and the FAA on the research and funding status of key technologies in Phase 2 and on technology development and applications at specific Bay Area airports.

3. RAPC should receive and review reports from SFO on its work to evaluate new demand management approaches; OAK should initiate demand management studies before the onset of major runway congestion.
4. RAPC may wish to investigate the use of inter-regional express buses to substitute for some short haul commuter flights into Bay Area airports.
5. A tracking system should be developed to determine how close each airport is to their estimated runway capacity and the time remaining until major delays are likely to occur.
6. Other: RAPC should support a pilot congestion pricing program in new FAA reauthorization legislation.

### **Task 3.a. Identify Potential new Air Traffic Control and Demand Management Strategies for Bay Area Airports**

- **Comment:** As with the aviation forecasts, staff is proposing to convene two expert working groups, one for new ATC technologies and one for demand management. The working groups will assist RAPC in identifying promising and realistic approaches for enhancing future runway capacity at the three commercial airports. Summary reports from each working group will be prepared and discussed with the stakeholder group and RAPC. The working group input will feed into the airport capacity analysis Task 3.b below.

### **Task 3. b. Estimate demand and capacity at SFO, OAK, SJC with and without:**

1. New Air Traffic Control Technology and Demand Management.
  2. Initiation of new airline service at alternative airports (per the Scenarios in Task 2.b).
  3. Improvements at GA reliever airports (to divert some business general aviation activity).
  4. Substitution of inter-regional express bus service for short haul commuter flights.
- **Comment.** This capacity assessment will better define the timeframes in which decisions have to be made and the impact of the potential strategies on enhancing regional aviation capacity.

### **Task 3. c. Develop a runway capacity tracking system**

- **Comment.** The two working groups would also assist in developing a capacity tracking approach.

### **Task 3 Deliverables**

- Report from the ATC working group, summarizing key points from discussions.
- Report from the Demand Management working group summarizing key points from discussions.
- A capacity assessment that includes an estimate of demand and capacity at SFO, OAK and SJO with and without the tools described above in Task 3.b. 1-4.
- Runway capacity tracking system.

## **Task 4. General Overview of Environmental and Economic Issues**

### **Phase 1 Recommendations for environmental and economic assessment:**

1. RAPC may wish to request that the FAA and airport further examine the potential benefits of Continuous Descent Approaches (CDAs) during low traffic periods (as a way to reduce noise and fuel consumption).

### **Task 4.a. Develop a qualitative assessment of regional impacts of the specific set of scenarios developed above relative to the following:**

1. Noise (land use compatibility, areas where changes in over flight noise might be expected)
2. Aircraft Emissions (potential for increased emissions and mitigation)

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opportunities)

3. Climate Change (fuel consumption, potential for mitigation opportunities)
  4. Biological (major airport site-specific issues)
  5. Economy (relative regional and local economic effects)
  6. Traffic/Ground Access (what types of regional road/rail improvements would be required; generalized discussion of local traffic impacts)
- **Comment.** This assessment would be presented to the Stakeholder group and RAPC for direction in further refining the scenarios for detailed evaluation (see Task 5 below).

**Task 4.b. Explore with the FAA and airports the potential to test a Continuous Descent Approach at Bay Area airports**

- **Comment.** The working group on new ATC technologies would begin to explore this topic with the FAA and airports.

**Task 4 Deliverables**

- White paper on the feasibility and potential benefits of the use of Continuous Descent Approaches at Bay Area airports
- Assessment of regional impacts that would result from the initial scenarios selected, including assessments on noise, emissions, economy, climate change, biological resources and ground access

**Task 5. Mid-Phase Screening Evaluation.** □RAPC will determine which scenarios/specific airports should be examined in greater detail based on the information developed in Tasks 1-4 above. These scenarios will be the subject of a second round of public meetings where the public will have the opportunity to evaluate and comment on the direction of Phase 2. Based upon the direction received from RAPC, the stakeholder group and the public, the remaining work on Phase 2 will focus on the long-range aviation solutions that are most promising according to the technical analyses and initial public input.

**Task 5.a. Develop a tabular matrix to assist RAPC in screening aviation system scenarios involving new air passenger, air cargo, and business general aviation elements.** The matrix would use information developed by the working groups, stakeholder input, public input, consultant products, etc. to highlight relative regional and local impacts/tradeoffs associated with the various scenarios.

- **Comment.** The goal of this step would be to narrow the field of scenarios that would continue to be analyzed to around 3 or 4 at the most, to provide for greater in depth, qualitative analysis.

**Task 5 Deliverables**

- A matrix that will assist RAPC in developing the set of scenarios that will be carried forward into the second half of Phase 2
- A report describing the scenarios that will be carried forward in Phase 2, including a brief discussion of those alternatives which were dismissed and will not be carried forward.



### **Task 6. Inventory of Vacant Land in Runway Approach and Departure Zones**

**Task 6.a. Develop an outreach strategy.** A strategy for receiving input from the GAAs and the Airport Land Use Commissions (ALUCs) will be developed to ensure participation from the appropriate parties in identifying critical parcels around the region's general aviation airports for acquisition or other forms of protection to provide improved noise and safety compatibility.

**Task 6.b. Develop Criteria for Identifying Vacant Parcels.** This initial task will determine the scope of the inventory of vacant land around the GAAs, considering applicable noise and safety land use compatibility standards and proximity to runways. This task will also consider the need for additional protection if an airport is to serve an expanded air passenger or air cargo role (see Tasks 2 and 7).

**Task 6.c Determine Information to be included in the Vacant Land Database.** This task will assess the availability of specific types of information for inclusion in the land database, including size, zoning, ownership, assessor value, etc. It will also include development of GIS-based maps around each airport identifying specific parcels in the database.

**Task 6.d. Develop a Vacant Land Database.** A database will be developed using the results of Task 6.b and 6.c.

**Task 6.e. Cost of Protecting Vacant Land.** For each general aviation airport, the cost of acquiring the land or easements for all the parcels in the database will be estimated. The most realistic acquisition protection strategy will also be identified in consultation with the airport operators and ALUCs.

#### **Task 6 Deliverables**

- Inventory of vacant land in runway approach and departure zones.

### **Task 7. Develop Additional Information on Scenarios**

#### **Task 7.a. Alternative Airports. Estimate costs of developing alternative airports, as required.**

1. Cost of terminals/parking, airfield improvements (runways, taxiways), navigational aids, security, etc.
  2. Ground Access (roads and transit)
  3. Land acquisition/protection (for safety and noise compatibility and other potential environmental impacts)
- **Comment.** Based on the type of role alternative airports might perform in the various remaining scenarios (e.g., passenger service, air cargo service, general aviation reliever for business aviation activity, etc.), a consultant would develop information on the conceptual cost of improving these airports to perform these suggested roles.

**Task 7.b. New ATC Technology/Demand Management.** Further development of new ATC technology and demand management strategies, as required.

- **Comment.** The working groups would continue to assist RAPC in developing specific proposals the region could use to take advantage of new ATC developments as well as support realistic airport-specific demand management approaches. These strategies would be included in the Vision/Implementation Plan in Task 9.

**Task 7 Deliverables**

- Cost estimates for developing alternative airports.
- Analysis of ground access for alternative airports.

**Task 8. Institutional Evaluation****Phase 1 Recommendations regarding Institutional Change:**

1. As part of the Phase 2 work scope, evaluate the strengths and weaknesses of various institutional approaches (such as a new Authority, Joint Powers Agreement, and Memorandum of Understanding, etc.) for addressing key planning and implementation issues identified in the June staff report to RAPC.
  - Improve long-range planning for the region's aviation needs
  - Influence airline service decisions
  - Flexible use of FAA funds for airport improvements
  - Acquire/operate new airports
  - Develop more effective demand management/delay reduction approaches
  - Resolve potential regional airspace issues
  - Expedite deployment of new Air Traffic Control technologies
  - Help resolve regional over flight noise issues (higher altitude noise, further from runways)
  - Make better use of general aviation airports as relievers to air carrier airports
  - Improve surface access to airports
  - Promote compatible land use around airports
  - Legislative solutions (funding, noise compatibility, other issues)

The need for institutional change may or may not be relevant, depending on the regional vision for the airport system developed during Phase 2. If determined to be relevant, then further analysis will be conducted in Phase 3.

**Task 8.a. Evaluate strengths and weaknesses of new Authority, JPA, MOU relative to long-range planning issues listed above.**

- **Comment.** Staff would prepare an initial assessment and then would convene a working group on this topic to review and refine staff's evaluation. The selected set of regional aviation scenarios from the mid-course screening step will also be used to provide more focused context for the institutional evaluation. The results of this evaluation will be reviewed with the stakeholder group.

**Task 8 Deliverables**

- Identification of possible members for a working group on this issue.
- White paper on institutional approaches.

**Task 9. Phase 2 Wrap up.** The following will be completed in the Phase 2 wrap up:

1. Present draft Vision and Implementation Plan, including draft findings and recommendations to stakeholder group.
  2. Present draft Vision and Implementation Plan, including draft findings and recommendations to public at third round of workshops.
  3. Present draft Vision and Implementation Plan, including draft findings and recommendations to RAPC for adoption.
  4. Adopt a Vision and Implementation Plan.
  5. Approve Phase 3 work scope (as required).
- **Comment.** To assist RAPC in developing its recommendations, a third round of public outreach meetings would be conducted around the region on the Vision/Implementation Plan and proposed Phase 3 work scope. These workshops would also:
    1. Report back on what we heard in the final workshop.
    2. Explain what was done with input.
    3. Explain the analysis conducted for the scenarios and results.
    4. Seek input on how RAPC should proceed.

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#### Task 9 Deliverables

- A Phase 2 Summary report would then be prepared by staff and used as the basis for RAPC's final set of recommendations.
- Adopted Vision and Implementation Plan
- Proposed and approved work scope for Phase 3, as necessary.

**Attachment A**  
**Possible Regional Aviation System Scenarios for Public Discussion**  
**(General Description/Key Issues)**

1. Continue to rely only on SFO/OAK/SJC for all the region's air service needs
  - Demand Management based on existing airport/FAA authority
  - New ATC deployment based on existing aircraft safety/separation standards
  - Complete currently planned mass transit connections to OAK/SJC
2. Redistribution of Flights among Bay Area airports
  - Redistribute flights to SFO, OAK, SJC to have each airport handle specific markets
  - Revise Airline Deregulation Act to allow for the above
  - New high speed ground connections between airports
  - A regional body to determine flight redistribution and set congestion pricing fees as required
3. Regionalization of Air Service/North Bay Focus
  - Air passenger service assumed one or more North Bay Airports (e.g., **Santa Rosa, Napa, Travis AFB**)
  - Includes marketing strategy to attract airline interest
  - Includes community land use plans to support this service
  - Includes new/improved ground access facilities for better accessibility
4. Regionalization of Air Service/ Regional Focus
  - Air passenger service assumed at one or more North Bay airports (as above)
  - In addition, new air service assumed in the East Bay (**Livermore, Buchanan, Byron**)
  - In addition, new air service assumed in the South Bay (**Moffett, South County**)
  - As above, airline marketing, community land use, and ground access elements to support new service
  - Assumes airspace operational changes, as required
5. Regionalization of Air Service/ Out-of-Region focus
  - Assumes new non-stop air service at **Sacramento, Stockton, Monterey, Redding** that would substitute for these passengers using Bay Area airports
  - Improved ground access between the Bay Area and these
  - Includes community land use plans to support expanded air service

- Assumes any airspace operational changes, as required

## 6. Regionalization of Air Cargo service

- New air cargo service assumed at one or more airports (e.g., **Travis, Moffett, Byron**)
- Includes marketing strategy to attract air cargo carriers
- Includes improved ground access connections for cargo distribution
- Includes community land use plans to support expanded service

## 7. Reliever General Aviation Scenario (to attract GA away from commercial airports)

- Assumes business general aviation diverted from Bay Area commercial airports to one or more general aviation/other airports (e.g., **Livermore, Moffett, South County, Buchanan, Napa, Santa Rosa, NutTree**, etc.)
- Assumes facility/service improvements needed to attract greater business aviation and on demand air taxi use
- Assumes new equipment/airspace procedures to support all weather operations
- Includes community land use plans to support this role

## 8. High Speed Rail

- Assumes new California HSR alignment, as currently proposed
- Assumes new HSR service plan and fares, as currently proposed
- Assumes community land use plans support terminals, stations, parking provisions, etc.